

## CONTAINER WITH A GYROSCOPE MOUNTING

5 This invention is concerned with a container, and in particular with a container that is sufficiently light to be used by children as a lunch box or to carry to school materials for school or playthings.

10 The present invention is a container comprising a hollow tubular body, closed at one end and open at the other, a platform in the body gimbal mounted to remain horizontal irrespective of the orientation of the body, and a handle secured to the body at its closed end.

15 Preferably the gimbal on which the body is mounted comprises an outer gimbal ring pivotally mounted on the inner surface of the body and an inner gimbal ring pivotally mounted on the outer gimbal, the pivot axes being mutually perpendicular and the platform being mounted on the inner gimbal ring.

20 The platform may be mounted beneath the inner ring and by a peripheral wall.

20 The platform may have a bias weight secured thereto.

Preferably the body is barrel shaped and the wall mounting the platform is also barrel shaped.

25 The handle may be flexible.

The handle may be rigid and pivotally mounted on the body.

5 Restraining means may be associated with the handle to engage the inner body and restrain its movement relative to the outer body when the handle is in its carrying position

An embodiment of the present invention will now be described by way of example with reference to the accompanying drawings, in which:-

10 Fig.1 diagrammatically illustrates a first embodiment of a container according to the present invention;

Fig. 2 is a cross section of a modified inner body in the container of Fig. 1:

Figs. 3A and 3B are cross sections through another embodiment of the invention;

Fig. 4 diagrammatically illustrates a modification of the embodiment of Figs. 3A and 3B; and

15 Fig. 5 illustrates a detail of the modified embodiment of Fig. 4.

Referring now to Fig. 1, a container 10 has a barrel shaped body 12 in which is located a gimbal mounted platform 14 which forms part of an inner body 15. In the drawing the container 10 is shown tilted so that some details of it are visible. The body 12 is, in this 20 embodiment, a section of a sphere is closed at one end 16 and is open at the other end 18, and at both ends a peripheral lip 20 is provided.

The gimbal on which the platform 14 is mounted comprises outer and inner gimbal rings 24 and 26, the outer ring 24 being pivotally mounted on lugs 28 on the inner surface of 25 the body 12 and the inner ring being mounted on lugs 30 on the inner surface of the outer ring 24. The respective axes of the lugs 28 and 30 are mutually perpendicular and the axis of the lugs 28 is, in this embodiment parallel to the ends . The platform 14 in this embodiment is

5 circular and is located beneath the inner ring 26. The platform 14 is secured to the inner ring by a peripheral wall 34 which is curved in section to match the curve of the body 12.

10 The centre of gravity of the inner body 15, comprising the combined platform 14 and wall 34, is below the inner ring 26, but if they are made of a light material, for example a plastics material, it may be desirable to add a weight to the platform to bias it to a horizontal position.

A flexible handle 40 is secured to the outer surface of the body at its closed end to function as a handle or a shoulder strap.

15 In use the platform 14 of this embodiment remains horizontal at all times. When the container is being carried by the handle the closed end of the outer body 12 is uppermost and anything on the platform 14 is effectively in a closed container. To access the contents the container is inverted so that the open end of the outer body 12 is uppermost, the platform 14 remains horizontal because of the gimbal mounting and the contents can then be removed 20 through the open end.

25 Fig. 2 is a cross section of a modified inner body 15 which has a substantially spherical cross section matching that of the outer body 12, the platform 14 being at one end, the closed end, of the body 15, the other end being open. The modified inner body 15 has a reverse flange 42 at its open end and annular corrugations 44 to limit movement of anything on the platform 14. A weight 46 is provided beneath the platform 14 and a drain hole 48 is provided in the platform.

Figs. 3A and 3B are cross sections through a further embodiment of the invention in  
5 which the handle is provided with opposed shafts 50 by means of which it is mounted on the  
outer body at its closed end. A pair of legs 52 are fixed on the shafts 50 to pivot with the  
handle 40 and when the handle is in its carrying position, as seen in Fig. 3B, engage the inner  
body 15 to restrain it against movement relative to the outer body.

10 In the embodiment of Fig. 4 the legs 52 are replaced by a cap 54 which is clear of the  
inner body 15 when the handle is stowed but which, when the handle is in the carrying  
position, closes the open end of the inner body to seal it as well as restraining it against  
movement. The cap 54, as seen in Fig. 5, may be rotatable on cranked shafts 56 to which the  
handle is secured so that the cap moves up and to the side as the handle moves from its  
15 carrying to its stowed position to open the inner container and free it from restraint. It is  
desirable that when the handle is in its stowed position the cap engages the inner wall of the  
outer body 12 so that it is prevented from interfering with movement of the inner body on the  
gimbal.

20 The legs 50 and cap 54 may be replaced by other means for restraining movement of  
the inner body relative to the outer body when the handle is in its carrying position.